

AGAVE IN THE BAHAMA ISLANDS

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Britton and Millspaugh (1920) were skeptical of four of the *Agave* species names which they employed in their Bahama Flora, as evidenced by the statement: "The four following species described by Professor Trelease may be but races of *A. bahamana*." They were all placed in Trelease's *Agave* Section *Bahamenses*. At the time, three of these "species" were known only from the type collections. Few specimens have been collected since. *Agave*, except for sisal, is known as "bamboo" or "manilla" in the Bahamas.

The major treatment of *Agave* for the West Indies is that of Trelease (1913), now 62 years old. Its consideration of Bahama was based (except populations for sisal) on 21 collections, from which Trelease carved seven endemic "species", differing in flower size (with an overlap of 40% between "small" and "large" flowers), proximity of spines on leaf margin ("close together" = 5-10 mm apart; "distant" = 10-25 mm apart), prickle size ("minute" = 1 mm; "small" = 2-3 mm; "medium" = 2-5 mm), and seed size ("small" = 4-5 mm and "large" = 4-6 X 7-8 mm). No two of Trelease's endemic species occur on the same island except *A. nashii* (which is treated herein as a true endemic species) and *A. inaguensis*. (Even so, *A. nashii* was collected on Inagua itself and *A. inaguensis* on Little Inagua.) *A. braceana* was reported only from islands on the Little Bahama Bank; *A. cacozela* only from New Providence; *A. millspaughii* only from Exuma and Long Island; *A. acklinicola* from Acklins; *A. indigatorum* from San Salvador; and *A. bahamana* from four islands - all on the Great Bahama Bank.

The capsule of *A. cacozela* is described as being "narrowly oblong" as opposed to those of *A. bahamana* and *A. millspaughii* which are "broadly oblong." The capsule on the type specimen of *A. cacozela*, however, is immature. Flowering material seen by Trelease was available for only four species; fruiting material for only four species; flowering and fruiting material for only a single species. Furthermore, the type of *A. acklinicola* is sterile.

Agave, as a genus, is long overdue for revision, especially in the West Indies. It is not possible at this juncture to prepare an adequate treatment in the light of modern taxonomy and biosystematics. It is possible, however, to re-examine the

specimens at hand, the characters used by Trelease and thence Britton and Millspaugh in their differentiation of taxa, and to reassess the status of their species concepts.

Degree of spininess is considered to be inconsequential in distinguishing species in *Agave*. Cultivated sisal is known with spineless leaf margins, with very spiny margins, and with both spiny and spineless margins on the same plant.

No collector needs to be reminded of hazards in gathering material of *Agave*. This genus ranks with palms as among the "big game" of the plant world. The leaves are fiendishly armed; they furthermore may be longer than three to six herbarium sheets laid end to end. They are extremely fleshy, not prone to drying out under field collecting conditions. The group known as century plants are monocarpic, with leaves beginning to die as flowers form, leaving few leaves available for collecting in an individual specimen by the time fruits are ripe. Determining what an individual *is*, based on existing treatments, is difficult. Unless one knows the source of a given plant or population, he must wait until it flowers and fruits and then, from diagnostic characters in reproductive structures, decide what the plant *was*! *Agave* taxonomy needs key vegetative characters cognitive to flower and fruit characters in order to be useful.

All of the species placed in synonymy below are acaulescent, not caespitose. All have variegated black and brown markings on the smooth, shiny inside of the capsule. All have gray leaves. All have crescent-shaped black seeds. From evidence garnered by studying the type collections and a few populations in the field, I conclude that there are three or possibly four species of *Agave* in the Bahama Archipelago: *A. sisalana*, a widespread escape from cultivation; *A. nashii*, endemic in the dry, windswept expanses of Inagua; and one other species, *A. bahamana*. Further studies might determine that *A. inaguensis* is indeed a distinct species but for the moment, it too is considered likely synonymous with *A. bahamana*.

The variations which Trelease considered of specific significance are herein treated as normal variation within and between populations of a single species. *Agave bahamana* is the name selected for this composite species composed of the several "species" of Trelease. Further, more complete, monographic studies may demonstrate that this name should be placed in synonymy with still an older name, very possibly *A. rigida* Miller. An early collection by John and Alice Northrop was determined around the turn of the century to be this species when compared to authentic Miller material by J. G. Baker of the Royal Botanic Gardens, Kew.

TENTATIVE KEY TO BAHAMA *AGAVE* SPECIES

1. Plants not suckering; leaves fleshy, curved.....*A. bahamana*
1. Plants freely suckering; leaves hard, straight.....2
 2. Leaves erect, variegated or transversely banded; flowers 3.5-5.0 cm long, yellow.....*A. nashii*
 2. Leaves ascending, uniform in color except where they bear the print of overlapping leaves; flowers 4.5-7.0 cm long, yellow-green.....*A. sisalana*

Agave bahamana Trelease, Mem. Natl. Acad. Sci. 11: 40. 1913.

Type: Berry Islands, Great Harbour Cay, *Britton and Millspaugh 2340*. Lectotype: NY; isotype: F-173454 (photos: F-173454a).

Agave acklinicola Trelease, Mem. Natl. Acad. Sci. 11: 41. 1913.

Type: Acklins Island, Pompey Bay. *Brace 4442*.
Lectotype: NY.

Agave braceana Trelease, Mem. Natl. Acad. Sci. 11: 40. 1913.

Type: Abaco, opposite Cherokee Settlement. *Brace 1982*.
Lectotype: NY; isotype: F-185996.

Agave cacozela Trelease, Mem. Natl. Acad. Sci. 11: 41. 1913.

Type: New Providence, rocky bank of salt marsh, Adelaide. *Britton and Brace 523*. Lectotype: NY; isotype: F-185943.

Agave indigatorum Trelease, Mem. Natl. Acad. Sci. 11: 42. 1913.

Type: San Salvador Island near upper end of Great Lake. *Britton and Millspaugh 6155*. Lectotype: NY; isotype: F-198892.

Agave millspaughii Trelease, Mem. Natl. Acad. Sci. 11: 41. 1913.

Type: Exuma, low coppice near Rolletown. *Britton and Millspaugh 3091*. Lectotype: NY; isotype: F-174227 (tracings of leaves: F-280849-51).

The treatment of *Agave inaguensis* is deferred until more material may be obtained, especially from the type locality on Little Inagua. The typification and description of *Agave sisalana* Perrine may be found in Trelease (1913).

Agave nashii Trelease, Mem. Natl. Acad. Sci. 11: 45. 1913.

Type: Inagua, Sandy Point. *Nash and Taylor 7684*.

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